

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1 (Withdrawn): A substrate coated with at least one dielectric thin-film layer deposited by sputtering, with exposure to at least one ion beam coming from an ion source wherein said dielectric layer exposed to the ion beam has a refractive index that can be adjusted according to parameters of the ion source, said ion source being a linear source.

Claim 2 (Withdrawn): The substrate as claimed in claim 1, wherein the density of the dielectric layer deposited on the substrate by sputtering with exposure to the ion beam is maintained.

Claim 3 (Withdrawn): The substrate as claimed in claim 1 wherein the dielectric layer exposed to the ion beam has a refractive index close to the index of a layer deposited without an ion beam.

Claim 4 (Withdrawn): The substrate as claimed in claim 1, wherein the dielectric layer exposed to the ion beam has a refractive index greater than the index of a layer deposited without an ion beam.

Claim 5 (Withdrawn): The substrate as claimed in claim 1, wherein the dielectric layer exposed to the ion beam has a refractive index less than the index of a layer deposited without an ion beam.

Claim 6 (Withdrawn): The substrate as claimed in claim 1, wherein said layer has an index gradient adjusted according to parameters of the ion source layer.

Claim 7 (Withdrawn): The substrate as claimed in claim 1, wherein said dielectric layer is made of a metal oxide or silicon oxide, whether stoichiometric or nonstoichiometric, or made of a metal nitride or oxynitride or silicon nitride or oxynitride.

Claim 8 (Withdrawn): The substrate as claimed in claim 1, wherein said dielectric layer is made of an oxide of at least one element selected from the group consisting of silicon, zinc, tantalum, titanium, tin, aluminum, zirconium, niobium, indium, cerium, and tungsten.

Claim 9 (Withdrawn): The substrate as claimed in claim 8, wherein the layer is made of zinc oxide and has a refractive index of less than or equal to 1.95.

Claim 10 (Withdrawn): The substrate as claimed in claim 8 wherein the layer is made of zinc oxide and has a density of around 5.3 g/cm^3 .

Claim 11 (Withdrawn): The substrate as claimed in claim 1, wherein said dielectric layer is made of silicon nitride or oxynitride.

Claim 12 (Withdrawn): The substrate as claimed in claim 1, wherein said layer has an argon content of around 0.2 to 0.6 at%.

Claim 13 (Withdrawn): The substrate as claimed in claim 1, wherein said layer has an iron content of less than or equal to 3 at%.

Claim 14 (Withdrawn): The substrate as claimed in claim 1, which is coated with a multilayer in which a silver layer is placed on top of said dielectric layer exposed to the ion beam.

Claim 15 (Withdrawn): The substrate as claimed in claim 14, wherein a second dielectric layer is placed on top of the silver layer.

Claim 16 (Withdrawn): The substrate as claimed in claim 14, wherein the multilayer includes at least two silver layers.

Claim 17 (Withdrawn): The substrate as claimed in claim 14, wherein the substrate has a surface resistance R_s of less than $6 \Omega / \square$.

Claim 18 (Withdrawn): A glazing assembly, a double-glazing assembly, or a laminated glazing assembly, comprising at least one substrate as claimed in claim 1.

Claim 19 (Previously Presented): A process for depositing one or more layers on a substrate in a sputtering chamber comprising a sputtering system comprising a target, a linear ion source and a conveying system, comprising:

conveying the substrate through the sputtering chamber,

depositing at least one dielectric thin-film layer on the substrate by sputtering with the sputtering system comprising the target,

generating at least one ion beam coming from the ion source in the sputtering chamber in the presence of the sputtering system comprising the target, and

adjusting the refractive index of said dielectric layer by modifying the angle between the ion beam and the surface of the substrate and/or modifying the voltage applied to the ionic source,

wherein the density of the dielectric layer deposited on the substrate is preserved.

Claim 20 (Previously Presented): The process as claimed in claim 19, wherein an oxygen ion beam is created.

Claim 21 (Previously Presented): The process as claimed in claim 19, wherein an ion beam is created with an energy of between 200 and 2000 eV.

Claim 22 (Canceled).

Claim 23 (Previously Presented): The process as claimed in claim 19, wherein the refractive index of the dielectric layer exposed to the ion beam is lowered relative to the index of this layer deposited without the ion beam.

Claim 24 (Previously Presented): The process as claimed in claim 19, wherein the refractive index of the dielectric layer exposed to the ion beam is increased relative to the index of this layer deposited without the ion beam.

Claim 25 (Previously Presented): The process as claimed in claim 19, wherein the exposure to an ion beam takes place simultaneously with the deposition of the layer by sputtering.

Claim 26 (Previously Presented): The process as claimed in claim 19, wherein the exposure to an ion beam takes place sequentially after the layer has been deposited by sputtering.

Claim 27 (Previously Presented): The process as claimed in claim 19, wherein an ion beam is directed onto the substrate.

Claim 28 (Previously Presented): The process as claimed in claim 19, wherein an ion beam is directed onto at least one cathode.

Claim 29 (Previously Presented): The process as claimed in claim 19, wherein the dielectric layer is based on zinc oxide.

Claim 30 (Previously Presented): The process as claimed in claim 19, wherein an ion beam is created in the sputtering chamber from a linear ion source simultaneously with the deposition of the layer by sputtering and in that the deposited layer then undergoes an additional treatment with at least one other ion beam.

Claim 31 (Withdrawn): An installation for deposition on a substrate, for the manufacture of the substrate as claimed in claim 1, which includes a sputtering chamber, wherein at least one dielectric thin-film layer is deposited on the substrate by sputtering, with exposure to at least one ion beam wherein the substrate includes, in the sputtering chamber at least one linear ion source capable of creating at least one ion beam.

Claim 32 (Withdrawn): The installation as claimed in claim 31, wherein a linear ion source is placed so as to direct an ion beam onto the substrate.

Claim 33 (Canceled):

Claim 34 (New): The process as claimed in claim 19, wherein the refractive index of said dielectric layer is decreased.